

### AMENDMENTS TO THE CLAIMS

1-31. (Previously Cancelled)

32. (Currently Amended) A process for preparing a soluble whey protein hydrolysate containing bioactive peptides which comprises:

- i) hydrolysing a whey protein-containing substrate with at least one heat labile protease, at a temperature of between about 20°C and 65°C at a pH of about 6 to about 8 when said protease is a neutral protease, at a pH of about 3 to about 5 when said protease is an acid protease, and at a pH of about 5 to about 10 when said protease is an alkaline protease,
- ii) terminating said hydrolysis when a degree of hydrolysis of no greater than 10% has been reached by deactivating said protease under conditions which produce a water soluble hydrolysate with a solubility of at least 65%, and
- iii) testing said hydrolysate for a bio-activity selected from the group consisting of angiotensin converting enzyme (ACE) inhibiting activity and reduction of *in vivo* blood pressure.

33. (Previously Added) A process as claimed in claim 32 wherein said substrate is sweet whey or sweet whey protein concentrate.

34. (Previously Added) A process as claimed in claim 32 wherein said protease is selected from the group consisting of Protease P6, Protease A, Protease M, Peptidase, Neutrase, Validase and AFP 2000.

35. (Previously Added) A process as claimed in claim 32 wherein said hydrolysis terminating step comprises heat deactivation.

36. (Previously Amended) A process according to claim 35 wherein said heat deactivation comprises heating said hydrolysate for up to ten seconds to a temperature up to 95°C.

37. (Previously Cancelled)

38. (Previously Cancelled)

39. (Previously Added) A process as claimed in claim 32 wherein said hydrolysis terminating step comprises altering the pH of said whey protein-containing substrate to a pH at which said protease is not active.

40. (Previously Added) A process as claimed in claim 39 wherein said hydrolysis terminating step includes heat deactivation.

41. (Previously Added) A process as claimed in claim 32 wherein said hydrolysis terminating step comprises subjecting said hydrolysate to ultrafiltration with an ultrafiltration membrane having a nominal molecular weight cutoff in the range of 10-500kDa.

42. (Previously Added) A process as claimed in claim 32 wherein said enzyme is immobilised on an inert support during said hydrolysis step.

43. (Previously Added) A process as claimed in claim 42 wherein said inert support is Roehn Eupergit, carrageenan particles, chitosan particles or any other suitable inert support material.

44. (Previously Added) A process as claimed in claim 32 wherein the degree of hydrolysis is about 3-5%.

45. (Previously Added) A process as claimed in claim 32 wherein the substrate also contains lactose, in an amount of about 5% by weight or higher.

46. (Previously Amended) A process as claimed in claim 45 wherein said lactose content is about 10% by weight or higher.

47. (Previously Added) A process as claimed in claim 45 wherein the amount of lactose present in the substrate is up to about 30% by weight.

48. (Previously Added) A process as claimed in claim 45 wherein the amount of lactose present in the substrate is up to about 50% by weight.

49. (Previously Amended) A process as claimed in claim 45, wherein the substrate is also treated with lactase and/or  $\beta$ -galactosidase, either before, during or after the whey protein hydrolysis, to hydrolyse the lactose to galactose and glucose and synthesize galacto-oligosaccharides.

50. (Previously Added) A process as claimed in claim 32 wherein the hydrolysate so prepared contains one or more of the bioactive peptides selected from the group consisting of AFE, LFSH (SEQ ID NO: 1), ILKEKH (SEQ ID NO: 2), LIVTQ (SEQ ID NO: 3), MKG, LDIQK (SEQ ID NO: 4), VF, ALPMH (SEQ ID NO: 5), VTSTAV (SEQ ID NO: 6), LHLPLP (SEQ ID NO: 7), LVYPFPGPIPNQLPQNIPP (SEQ ID NO: 8) and LFRQ (SEQ ID NO: 9).

51. (Previously Cancelled)

52. (Previously Cancelled)

53. (Previously Cancelled)

54. (Previously Cancelled)

55. (Previously Cancelled)

56. (Previously Cancelled)

57. (Previously Cancelled)

58. (Previously Cancelled)

59. (Currently Amended) An isolated peptide ~~Any one or any combination of two or more of the bioactive peptides~~ selected from the group consisting of AFE, LFSH (SEQ ID NO: 1), ILKEKH (SEQ ID NO: 2), LIVTQ (SEQ ID NO: 3), MKG, LDIQK (SEQ ID NO: 4), ALPMH (SEQ ID NO: 5), VTSTAV (SEQ ID NO: 6), LVYFPFGPIPNLSLPQNIPP (SEQ ID NO: 8) and LFRQ (SEQ ID NO: 9).

60. (Previously Cancelled)

61. (Previously Cancelled)

62. (Currently Amended) A method of reducing systolic blood pressure in a subject which comprises administering an effective amount of a peptide or a combination of peptides selected from the group consisting of AFE, LFSH (SEQ ID NO: 1), ILKEKH (SEQ ID NO: 2), LIVTQ (SEQ ID NO: 3), MKG, LDIQK (SEQ ID NO: 4), ALPMH (SEQ ID NO: 5), VTSTAV (SEQ ID NO: 6), LVYFPFGPIPNLSLPQNIPP (SEQ ID NO: 8) and LFRQ (SEQ ID NO: 9) ~~as claimed in claim 59.~~

63. (Previously Added) A process as claimed in claim 32 wherein the degree of hydrolysis is from about 4% to about 10%.

64. (Previously Added) A process according to claim 32 which includes the additional step of separating individual peptides from said hydrolysates using preparative liquid chromatography.

**Appl. No.** : **09/720,041**  
**Filed** : **April 2, 2001**

65. (Previously Added) A process according to claim 64 wherein said liquid chromatography comprises reverse phase high performance liquid chromatography.
66. (Previously Added) A process according to claim 65 which includes the additional step of testing said individual peptides for bio-activity.
67. (Previously Added) A process according to claim 66 wherein the bio-activity tested for is angiotensin converting enzyme inhibiting activity.
68. (Previously Added) A process according to claim 32 wherein the bio-activity tested for is angiotensin converting enzyme inhibiting activity.